

OPTICAL RECEIVER INCLUDING A
LINEAR SEMICONDUCTOR OPTICAL AMPLIFIER

ABSTRACT OF THE DISCLOSURE

An improved optical receiver comprises a vertically lasing semiconductor optical amplifier (VLSOA) coupled to a photodetector. The VLSOA and photodetector are discrete devices or alternatively integrated onto a common substrate. The integrated optical receiver may be fabricated using a number of different methods, including based on selective area epitaxy, impurity induced disordering, etch and fill and silicon optical bench.